

PROJECT NUMBER: 1307
PROJECT TITLE: Reconstituted Tobacco Development
PROJECT LEADER: R. G. Uhl
PERIOD COVERED: June, 1988

I. IMPROVED SHEET PROPERTIES

A. Objective: Improve the physical characteristics and blend performance of reconstituted sheet materials.

B. Results:

1. **ART Project** - Pilot RL sheets incorporating ART stems with reduced monopotassium citrate levels (12% and 8% versus 17%) at two ART stem usage levels (replacing 34% and 17% of the feedstock bright stems) were made into blended cigarettes for subjective comparison to direct inclusion models. Preliminary indications are that subjective differences are still detectable, but the test materials become less objectionable as the citrate level decreases.

The 12% citrate ART stems were also used to replace 10% and 5% of the RL feedstock bright stems. These sheets are being evaluated in 100% cigarettes to determine an ART stem usage level that provides subjective parity with control RL.

These same 12% citrate ART stems (replacing 34% of the feedstock bright stems) were used to produce solubles crossover sheets. These are being evaluated (100% RL cigarettes) to determine whether the subjective characteristics associated with ART stems follow the soluble (CEL) or the insoluble (baseweb) phase.

Pilot RL was also produced using ART stems with 7.5% citric acid (replacing 34% and 17% of the feedstock bright stems).

2. **Humectants** - Casing reformulations for glycerin-free blends are currently under evaluation. A POL remake is scheduled for July.

PG/glycerin-free Park 500 RL sheets were deemed subjectively acceptable. The corresponding BL Plant RCB is being screened. A small-scale Semiworks evaluation of PG/glycerin-free blends is delayed to August.

Pilot RL sheets containing individual humectants (PG, glycerin, isosweet, or no humectant) have been started through Semiworks survivability testing to better define the relative merits of humectants vs water in improving shred size.

C. Plans:

1. Complete subjective comparison, in pilot RL, of ART stems containing citric acid vs monopotassium citrate.

2. Complete subjective screening of ART solubles crossover RL sheets.
3. Continue Semiworks testing of individual humectant sheets.

II. SUBJECTIVE MODIFICATION OF RL

A. Objective: Improve or modify the subjective character of RL.

B. Results:

1. A liquid flavor sample has been received from Takasago for analysis and evaluation. A sample of their native extract (as extracted and before adjustment of sugars) is pending. This will subsequently be compared to the Chart flavor sample. The best approach to providing a consistent liquid flavor for the sheet plants appears to be purchase of the native extracts from two suppliers, and subsequent blending and final sugar adjustment in-house.
2. Although some peripheral equipment has been received, delivery of the Branson ultrasonic rental unit has been delayed by the vendor. Installation is scheduled in July, and will be coordinated with a necessary pilot plant shutdown for replacement of the sprinkler system main header.

C. Plans:

1. Produce pilot RL to evaluate Chart and Takasago liquid flavors as made available from Flavor Development.
2. Complete installation of the Branson ultrasonic rental unit.